REMARKS

1. Summary of the Office Action

In the non-final Office Action mailed May 16, 2011, the Examiner rejected claims 1-3, 11-12, 14, 16, 18, 21, 28-30, 32, 36, 42-47, 50-53, 55-61, 83, 101, 103, 112-116, 118, and 119 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Pat. No. 6,414,955 (Clare) in view of U.S. Pat. No. 5,608,643 (Wichter) and PCT Pat. Pub. No. WO 98/56140 (Larsen); rejected claims 4-10, 19, 25, 38-41, 48, 49, and 62 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Clare in view of Wichter, Larsen, and U.S. Pat. No. 6,615,088 (Myer); rejected claims 63, 65-67, 69, and 73-79 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Clare in view of Wichter, Larsen, and U.S. Pat. No. 6,245,013 (Minoz); and rejected claims 13, 17, and 25 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Clare in view of Wichter, Larson, and U.S. Pat. No. 5,184,311 (Kraus).

The Examiner rejected claims 15, 54, and 117 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Clare in view of Wichter, Larsen, and U.S. Pat. No. 5,742,829 (Davis); rejected claims 19, 20, and 31 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Clare in view of Wichter, Larsen, and U.S. Pat. App. Pub. No. 2002/0154631 (Makansi); and rejected claims 9, 22-24, 26, 27, 37, 68, and 70-72 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Clare in view of Wichter, Larsen, and U.S. Pat. No. 6,546,419 (Humpleman). The Examiner also rejected claim 92 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Clare in view of Wichter and U.S. Pat. No. 5,729,542 (Dupont) and rejected claim 94 over Clare in view of Wichter and Dupont and further in view of Larsen.

Additionally, the Examiner objected to claims 34 and 35 as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant thanks the Examiner for this notification of allowable subject matter.

2. Summary of Examiner Interview Held July 11, 2011

On July 11, 2011, the Examiner and Tom Loos for the Applicant discussed the application via telephone. Prior to the interview, Applicant provided the Examiner with

proposed amendments to claims 1 and 63 as indicated below:

1. (Currently amended) A sensor network comprising a plurality of network elements including at least one node configured to be coupled among a monitored environment,

wherein the at least one node is further configured to be remotely controllable and to determine an energy cost for communication and a message priority, wherein the energy cost is determined based on one or more attenuation values, wherein the one or more attenuation values comprise at least one attenuation value for wireless communication and at least one attenuation value for wired communication,

wherein the at least one node is further configured to distribute objects for data processing to one or more of the plurality of network elements, wherein the objects for data processing comprise data and executable code, and

wherein the distribution of the objects for data processing varies based on the energy cost for communication and the message priority.

63. (Currently amended) A sensor network including at least one node configured to be coupled among an environment, and

wherein the at least one node comprises a first node configured to operate at least one real time process using at least a first processor and operate at least one non-real time process using at least a second processor, wherein the first processor is configured to provide a plurality of commands to the second processor collectively, and wherein the second processor is configured to store and subsequently execute the plurality of commands,

wherein the at least one node is further configured to determine an energy cost for communication and a message priority, wherein the energy cost is determined based on one or more attenuation values,

wherein the at least one node is further configured to distribute data processing in the sensor network, and

wherein the distribution of the data processing varies based on the energy cost for communication and the message priority.

Applicant proposed making similar amendments to those made in claim 1 to independent claims 83, 101, 103, and 112.

For claim 1, Applicant argued that the cited art generally, and Larsen specifically, did not disclose or suggest the use of both wired and wireless networks, much less "wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication" as recited in amended claim 1. The Examiner responded that Larsen, as cited in the Office Action, suggested these features of claim 1 taking into account the broadest reasonable interpretation of claim 1 as amended.

The Examiner also suggested amending the term "one or more attenuation values" as these values, as amended in claim 1, include both "at least one attenuation value for wireless communication" and "at least one attenuation value for wired communication." Applicant

agreed to consider these remarks in amending claim 1 before filing a response. No agreement was reached regarding disclosure and suggestion of the art for claim 1.

For claim 63, Applicant argued that the cited art generally, and Minoz specifically, did not disclose or suggest wherein the first processor is configured to provide a plurality of commands to the second processor collectively, and wherein the second processor is configured to store and subsequently execute the plurality of commands as recited in proposed amended claim 63. The Examiner indicated some concerns that this amendment may fall outside of the scope of the originally filed claims, and thus be subject to restriction. Applicant thanked the Examiner for this advice, and agreed to take the scope of the claims into consideration before filing a response.

For claim 92, Applicant argued that "one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event" where "at least one inhibit message of the one or more inhibit messages is broadcast wirelessly" as recited in claim 92 was not shown in the art. The Examiner responded that Dupont, as cited in the Office Action, disclosed these features of claim 92. No agreement was reached regarding claim 92.

No other claims, art, or pertinent issues were discussed.

Applicant thanks the Examiner for sharing his time and expertise during the interview.

3. Summary of the Claims

Previously, claims 33, 64, 80-82, 84-91, 93, 95-100, 102, and 104-111 were cancelled. Now pending are claims 1-32, 34-63, 65-79, 83, 92, 94, 101, 103, and 112-119, of which claims 1, 63, 83, 92, 101, 103, and 112 are independent claims, and the remaining claims are dependent claims.

In this response, Applicant has amended claims 1, 4, 11, 63, 67, 72, 83, 101, 103, and 112. Support for these amendments can be found throughout the application, and specifically, for example, on at least page 20, line 22 – page 21, line 14; page 23, line 17 – page 24, line 28; page 25, line 22 – page 29, line 18; page 30, lines 5-12; page 48, line 27 – page 49, line 19; and page 87, line 4 – page 89, line 2 of the specification and at least Figures 11 and 15-19.

4. Response to Claim Rejections

a. Response to Rejection of Claim 1

As mentioned above, the Examiner rejected claim 1 under 35 U.S.C. § 103 as allegedly being unpatentable over Clare in view of Wichter and Larsen.

In response, Applicant has amended claim 1 include the subject matter of previous claim 11. As amended, claim 1 recites, in part, "at least one node is further configured to be remotely controllable and to determine an energy cost for communication and a message priority, wherein the energy cost is determined based on a plurality of attenuation values, wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication."

For at least the reasons specified herein, the cited art, alone or in combination, does not disclose or suggest at least the above-quoted functionality of claim 1 and thus does not support a rejection of claim 1. Additionally, Applicant submits the Examiner did not establish a *prima facie* case of obviousness for claim 1 under M.P.E.P. § 2142. Thus, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of claim 1 under 35 U.S.C. § 103.

i. Discussion of Clare

Clare "relates to wireless networks for data transmission, telemetry, or for the remote monitoring of some physical condition or process." Clare, col. 1, lines 7-9. In such networks, Clare states that

> acquired information (the identity, location, and the communication and interference neighbors of the new node) is disseminated to the network, at least locally as needed to schedule communications….Similarly, the new node receives the routing and other information from the network and stores the information in its microprocessor. The new node 210 is now a member node of the network. That node may in turn issue invitations for other new nodes to join. The new node characterization method is then repeated from each member node and for each new node…

Clare, col. 14, lines 13-16 and 22-29. Clare also mentions that

> [w]hen the new node receives the pair-wise communication schedule (232), it will exchange, negotiate and launch active processes (232). These active processes could include high priority, overriding instructions or data from the user such as "power down for five minutes" or "all sensors to maximum alert activity." Urgent instructions to the network of this type will be acted on immediately, before completing the topology learning method.

Clare, col. 15, lines 11-18.

However, Clare does not disclose or suggest "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication" as recited in claim 1. Rather, Clare is silent regarding determining an energy cost for communication.

ii. Discussion of Wichter

Wichter does not cure the above-mentioned deficiencies in Clare.

Wichter describes "a system for managing multiple dispensing units," including "[a d]ispensing unit controller system 14 [that] allows management of multiple dispensing units 10 by utilizing the event-driven status messages sent by dispensing units 10." Wichter, col. 3, line 15 and col. 11, lines 11-13.

In this context, Wichter states that

> [m]essages include three priorities: a high priority, a normal priority and a delay priority. Message processor 54 processes high priority messages immediately. Normal priority messages are processed when no more high priority messages are in communications log 44. Finally, communications interface 40 waits until a specified time to send out delayed messages, a priority only applicable to outgoing messages. Delay priority can be used to preschedule status request messages to be transmitted prior to order generation to make orders as accurate as possible. The delay priority can also be utilized to transmit status request messages during off hours to take advantage of reduced cost of communications network 12.

Wichter, col. 11, lines 52-64.

However, like Clare, Wichter does not disclose or suggest "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication" as recited in claim 1. Rather, Wichter is silent regarding determining an energy cost for communication, much less determining an "energy cost" that is "based on a plurality of attenuation values."

For at least these reasons, Wichter does not cure the above-mentioned deficiencies in Clare.

iii. Discussion of Larsen

Applicant submits that Larsen does not cure the above-mentioned deficiencies in Clare and Wichter.

Larsen is directed to "a method of operating a communication network comprising a plurality of stations each able to transmit and receive data so that the network can transmit data from an originating station to a destination station via at least one intermediate station." Larsen, p. 2, ¶ 1.

Larsen describes an example network shown in Figure 1 with "an originating station A [that] is able to communicate with five 'nearby' stations B to F, and is transmitting data to a destination station 0 via intermediate stations B, I and M." Larsen, p. 10, ¶ 2.

Larsen discloses that

> [a] communication network of the abovementioned kind comprises many stations trying to communicate on the same set of channels. The channels can be defined as having different frequencies, different media, different coding (e.g. different spreading codes), different antennas, different time slots etc., or any combination of these. In order to optimise channel re-use, the invention provides for stations to try to maintain a limited number of immediate neighbours, typically 5 neighbours. A neighbour is defined as another station that a given station can communicate with.

Larsen, p. 10, ¶ 5.

Larsen further states that **"[a]lthough the abovementioned patent application describes a packet radio network** it will be appreciated that the invention is applicable to other networks in which user stations can communicate with one another via intermediate stations in the network." Larsen, p. 9, ¶ 6 (emphasis added).

In describing the network, Larsen discloses that:

> even though a station may hear another station often and for long periods of time, the other station may be far away, in which case the transmissions received are not 'strong'. The transmit power required is calculated from the path loss to the other station. The weaker the received signal the larger the path loss, and thus the more transmit power required. The larger the transmit power required the larger the transmit power required gradient. Since a station routes towards areas of lower transmit power required it will tend to route to other stations that are closer.

Larsen, p. 36, ¶ 4 (extending to top of p. 37).

However, like Clare and Wichter, Larsen does not disclose or suggest "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation

value for wireless communication and at least one attenuation value for wired communication" as recited in claim 1.

At best, as quoted above, Larsen discloses a "packet radio network" in which "[t]he transmit power required is calculated from the path loss to the other station." Larsen, p. 9, ¶ 6; p. 36, ¶ 4. But Larsen does not disclose or suggest use of "at least one attenuation value for wired communication" as recited in claim 1. Rather, Larsen is silent regarding wired communications, much less "at least one attenuation value for wired communication" as recited in claim 1.

The substantive language of previous claim 11 was added to claim 1 in this response. The Examiner had argued that Larsen's statement that "[a]lthough the abovementioned patent application describes a packet radio network it will be appreciated that the invention is applicable to other networks in which user stations can communicate with one another via intermediate stations in the network" supported rejection of previous claim 11. Office Action, p. 5.

This statement on page 9 of Larsen indicating "applicab[ility] to other networks" does not disclose or suggest use of "at least one attenuation value for wired communication" as now recited in claim 1. Rather, Applicant submits that Larsen merely expresses a potential of applicability to other networks without mention of wired networks, and specifically, without mention or suggestion of "at least one attenuation value for wired communication" as recited in claim 1.

Further, there is no disclosure or suggestion in Larsen regarding use of attenuation values two or more different communication technologies, including wireless and wired communications. In contrast, amended claim 1 recites "at least one attenuation value for wireless communication" **and** "at least one attenuation value for wired communication."

For at least these reasons, Larsen does not cure the above-mentioned deficiencies in Clare and Wichter.

iv. Discussion of Kraus

Applicant submits that Kraus does not cure the above-mentioned deficiencies in Clare, Wichter, and Larsen.

Kraus discloses "methods of operating installations or systems that comprise long electrical conductors." Kraus, col. 1, lines 7-9. In this context, Kraus describes a

hierarchical data collection network is schematically depicted in FIG. 2, wherein

> n sensors (201-20n) provide data to m [data collection stations (DCSs)] (211-21m; typically m≤n). As shown in FIG. 2, p intermediate level stations (221-22p; typically p≤m) receive consolidated data from the DCSs and in turn provide further consolidated data to top level station 23 (and, optionally, to one or more user facilities), which in turn provides data to one or more user facilities.

Kraus, col. 7, lines 2-10; *see also* Kraus, col. 7, lines 11-30.

However, like Clare, Wichter, and Larsen, Kraus does not disclose or suggest "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication" as recited in claim 1. Rather, Kraus is silent regarding determining an energy cost for communication.

For at least these reasons, Kraus does not cure the above-mentioned deficiencies in Clare, Wichter, and Larsen.

v. Discussion of Davis

Applicant submits that Davis does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, and Kraus.

Davis describes "automati[c] install[ation of] software on client computers that are heterogeneous with respect to each other, as well as to server computers in a distributed system." Davis, col. 3, lines 24-27. In this context, Davis discloses:

> FIG. 3A depicts a more detailed block diagram of the site server 202 of FIG. 2.… [containing] a copy of 'MICROSOFT WINDOWS NT' 310, a number of services 312, 314, 318, 320, 322 that provide the functionality of the centralized management system, and a site configuration manager 316 that is further described below. 'MICROSOFT WINDOWS NT' 310 acts as both a network operating system and a local operating system to the site server. A 'service' is a computer program that typically runs as a background task and performs a system function, such as a function related to the centralized management system described herein. The services that provide the functionality of the centralized management system include the scheduler 312, the despooler 314, the inventory processor 318, the inventory data loader 320, and the sender services 322. The scheduler 312 is responsible for scheduling jobs such as software updates to occur across the distributed system and when the time has arrived for the job to be performed, the despooler 314 is responsible for performing the job by distributing the software to one or more computers within the site. The inventory processor 318 is responsible for receiving inventory information from the computers within a domain and passing the data to the inventory data loader 320. The inventory data loader 320 is responsible for receiving the data, correlating the data, and

storing the data into a database on the SQL server. The sender services 322 is responsible for performing site-to-site communications.

Davis, col. 6, lines 23-24 and 33-58.

However, like Clare, Wichter, Larsen, and Kraus, Davis does not disclose or suggest "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication" as recited in claim 1. Rather, Davis is silent regarding determining an energy cost for communication.

For at least these reasons, Davis does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, and Kraus.

vi. Discussion of Makansi

Applicant submits that Makansi does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, Kraus, and Davis.

Makansi discloses "a method and apparatus for transmitting messages as packets over a network." Makansi, ¶ 0002. Makansi mentions "transmitting a message as packets including…forming packets with random sizes, transmitting packets in random order, transmitting the packets through different routes in the network, and transmitting dummy data within the packets." Makansi, ¶ 0010.

However, like Clare, Wichter, Larsen, Kraus, and Davis, Makansi does not disclose or suggest "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication" as recited in claim 1. Rather, Makansi is silent regarding determining an energy cost for communication.

For at least these reasons, Makansi does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, Kraus, and Davis.

vii. Discussion of Humpleman

Applicant submits that Humpleman does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, Kraus, Davis, and Makansi.

Humpleman discloses a "[m]ethod and system for performing a service on a home

network having a plurality of home devices connected thereto." Humpleman, Abstract. In this context, Humpleman describes a variety of "control interfaces for a home network" that include "supporting utility network functions…interface details of a client device…control and capacity interfaces for all audio and video services…an interface to a home automation lighting controller…control interfaces to communication devices…remote control of the HVAC system…an interface for reading utility meters…[an] interface for security sensors and alarm settings…interfaces for kitchen, utility, and general home appliances…[and] interfaces to devices providing convenience services such as interface to a curtain, window, blinds or whirlpool controllers…" Humpleman, col. 22, line 22 – col. 23, line 2.

However, like Clare, Wichter, Larsen, Kraus, Davis, and Makansi, Humpleman does not disclose or suggest "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication" as recited in claim 1. Rather, Humpleman is silent regarding determining an energy cost for communication.

For at least these reasons, Humpleman does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, Kraus, Davis, and Makansi.

viii. Discussion of Myer

Applicant submits that Myer does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, Kraus, Davis, Makansi, and Humpleman.

Myer discloses "a system and method of device driver configuration for a control system." Myer, col. 1, lines 8-10; *see also* Myer, col. 1, lines 26-30. Myer discusses a "system 10" that

> includes a control network portal 12 coupled between the Internet 22 and one or more control area networks 30 and 31. Control area networks 30 and 31 are local area networks operating under transport protocols such as Ethernet, and AXLink and PHASTLink® of AMX Corporation (Dallas, Tex.) that interconnect a variety of devices, appliances and/or equipment. The underlying network connectivity 34 may be wired, wireless, power line carriers, or any suitable transmission medium.

Myer, col. 2, lines 52-60.

However, like Clare, Wichter, Larsen, Kraus, Davis, Makansi, and Humpleman, Myer does not disclose or suggest "determin[ing] an energy cost for communication…wherein the

energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication" as recited in claim 1. Rather, Myer is silent regarding determining an energy cost for communication.

For at least these reasons, Myer does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, Kraus, Davis, Makansi, and Humpleman.

ix. Discussion of Minoz

Applicant submits that Minoz does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, Kraus, Davis, Makansi, Humpleman, and Myer.

Minoz "relates to ambulatory recording, of medical data especially for diagnostic purposes, and particularly to an ambulatory recorder having synchronized communication between two processors." Minoz, col. 1, lines 9-12. Minoz discloses that "[ambulatory medical] recorders… are battery powered. Thus an ambulatory medical recorder must minimize energy usage while performing almost constant sampling across a variable number of channels at one or more frequencies. Besides minimizing energy usage, such recorders, however, must also offer robust functionality, i.e., be easy to operate, while also being flexible." Minoz, col. 1, lines 43-50.

Minoz discloses a

> recorder 1 [that] features a battery 20 which is coupled to the signal conditioning/data acquisition block that is driven by a real time processor 21, the battery is coupled as well as to a non-real time processor 22 that runs the application. As disclosed in more detail below, real time processor 21 is a lower power processor which is used to sample data which is received from sensor input 23 by a sensor attached there to (not shown in this FIG.).

Minoz also discloses that

> [t]he sampling and sensing controls are provided by the real time processor 21…. As further seen, this processor is coupled to second non-real time processor 22. Second processor 22 is provided primarily to perform those high processing operations associated with multitasking, graphical user interface, floating point calculation, Infra Red communication and long term memory storage. In particular, second processor is primarily provided to operate a Windows CE operating system as well as one or more embedded applications….

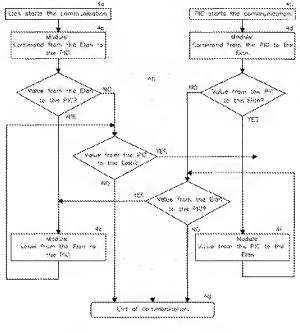
Minoz, col. 4, lines 1-12.

Minoz further discloses that "[t]he recorder preferably features two processors which are

of differing architectures--the first processor being a real time processor (RTP) which handles the sampling function, the second processor being a non real time (NRTP) processor which handles the operating system function." Minoz, col. 11, lines 18-23.

Figure 4 is a "flowchart of the communication protocol" used by the RTP (PIC processor) and NRTP (ELAN processor) and is reproduced below. Minoz, col. 2, lines 47-48; col. 5, lines 58-60.

FIGURE 4



Minoz discloses that "[t]he communication always starts by one of the processors sending data or a command to the other one; and then, according to the data or command, the two processors exchange values until the end of communication." Minoz, col. 5, lines 48-51.

However, like Clare, Wichter, Larsen, Kraus, Davis, Makansi, Humpleman, and Myer, Minoz does not disclose or suggest "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at

least one attenuation value for wired communication" as recited in claim 1. Rather, Minoz is silent regarding determining an energy cost for communication.

For at least these reasons, Minoz does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, Kraus, Davis, Makansi, Humpleman, and Myer.

x. Discussion of Dupont and Conclusion

Applicant submits that Dupont does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, Kraus, Davis, Makansi, Humpleman, Myer, and Minoz.

Dupont is related to "communicating data in a wireless communication system" including "a system for controlling access through the use of varying access probabilities for subscribers of varying priority." Dupont, col. 1, line 14; col. 2, lines 42-44.

Dupont continues:

> [v]alues representative of these access probabilities are then transmitted to the subscriber unit(s), for example by use of a system broadcast channel or control channels. These values are then used by each subscriber communication unit in determining when to access a communication resource, e.g., an uplink channel. In calculating these values, one may use, e.g., a temporal or a proportional priority distribution as more fully described below. As a result of this contention-based prioritization scheme, an expedited access is achieved by higher priority units, thus increasing the overall throughput.

Dupont, col. 2, lines 48-60.

Dupont discloses that

> a temporal distribution can be effected by setting the broadcast access probability of one or more of the lower priority classes to 0. The remaining priority groups would apply the applicable access value to determine when to attempt access. **Alternately, rather than setting some values to 0 an inhibit message can be sent as part of the access control parameters message**. These approaches are particularly advantageous in taking advantage of changing loading conditions, without forcing all classes of the lowest group to contend for a significantly shortened access resource. For example, as loading increases a best efforts service (BES, class 5 in GPRS) could be readily set to probability 0 without affecting the QoS delays for classes 1-4. As loading continues to increase, classes 4 to 2 could be progressively shed by setting their probability to 0 as needed to maintain access for the higher priority classes.

Dupont, col. 7, lines 30-46.

Claim 3 of Dupont also discloses, in part, "providing plural access periods, including a first access period when the second group is inhibited from sending access messages and a second access period when both the first and second groups can send access messages." Dupont,

col. 3, lines 3-6.

However, like Clare, Wichter, Larsen, Kraus, Davis, Makansi, Humpleman, Myer, and Minoz, Dupont does not disclose or suggest "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication" as recited in claim 1. Rather, Dupont is silent regarding determining an energy cost for communication.

For at least these reasons, Dupont does not cure the above-mentioned deficiencies in Clare, Wichter, Larsen, Kraus, Davis, Makansi, Humpleman, Myer, and Minoz.

As the subject matter of claim 1 is not disclosed or suggested in the cited art, the cited art does not support a rejection of claim 1 under 35 U.S.C. § 103. Further, the Examiner has failed to make a *prima facie* case of obviousness for claim 1 as required by M.P.E.P. § 2142. Thus, for at least these reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of claim 1 under 35 U.S.C. § 103.

b. Response to Rejection of Claim 63

As mentioned above, the Examiner rejected claim 63 under 35 U.S.C. § 103 as allegedly being unpatentable over Clare in view of Wichter, Larsen, and Minoz. Applicant submits that the cited art does not support a rejection of claim 63 under 35 U.S.C. § 103.

As amended, claim 63 recites, in part, "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication."

For at least the reasons presented above for claim 1, the cited art does not disclose or suggest at least the above-quoted functionality of claim 63 related to determining energy costs based on a plurality of attenuation values. Thus, the cited art does not support a rejection of claim 63 under 35 U.S.C. § 103. Further, the Examiner has failed to make a *prima facie* case of obviousness for claim 63 as required by M.P.E.P. § 2142.

For at least these reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of claim 63 under 35 U.S.C. § 103.

c. Response to Rejection of Claim 83

As mentioned above, the Examiner rejected claim 83 under 35 U.S.C. § 103 as allegedly being unpatentable over Clare in view of Wichter and Larsen. Applicant submits that the cited art does not support a rejection of claim 83 under 35 U.S.C. § 103.

As amended, claim 83 recites, in part, "determin[ing] an energy cost for communication…wherein the energy cost is determined based on a plurality of attenuation values" where "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication."

For at least the reasons presented above for claim 1, the cited art does not disclose or suggest at least the above-quoted functionality of claim 83 related to determining energy availability based on a plurality of attenuation values. Thus, the cited art does not support a rejection of claim 83 under 35 U.S.C. § 103. Further, the Examiner has failed to make a *prima facie* case of obviousness for claim 83 as required by M.P.E.P. § 2142.

For at least these reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of claim 83 under 35 U.S.C. § 103.

d. Response to Rejection of Claim 92

As mentioned above, the Examiner rejected claim 92 under 35 U.S.C. § 103 as allegedly being unpatentable over Clare in view of Wichter and Dupont. Applicant submits that the cited art does not support a rejection of claim 92 under 35 U.S.C. § 103.

Claim 92 recites, in part, "wherein, in response to receipt of the high priority message code, the at least one node is configured to broadcast one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event, wherein at least one inhibit message of the one or more inhibit messages is broadcast wirelessly."

Applicant submits that the subject matter of amended claim 92 is not disclosed or suggested in the cited art, and thus the cited art does not support a rejection of claim 92 under 35 U.S.C. § 103. Further, the Examiner has failed to make a *prima facie* case of obviousness for claim 92 as required by M.P.E.P. § 2142. Thus, for at least these reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of claim 92 under 35 U.S.C. § 103.

The Examiner acknowledged that "Clare-Wichter does not explicitly teach that in response to receipt of the high priority message code, the at least one node is configured to

broadcast one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event, wherein at least one inhibit message of the one or more inhibit messages is broadcast wirelessly." Office Action, p. 28

Applicant submits that Dupont does not cure the acknowledged deficiencies in Clare and Wichter. Dupont is summarized above in the context of claim 1. In particular, Dupont discloses that "a temporal distribution can be effected by setting the broadcast access probability of one or more of the lower priority classes to 0. The remaining priority groups would apply the applicable access value to determine when to attempt access. **Alternately, rather than setting some values to 0 an inhibit message can be sent as part of the access control parameters message**." Dupont, col. 7, lines 30-36 (emphasis added).

Claim 3 of Dupont also discloses, in part, "providing plural access periods, including a first access period when the second group is inhibited from sending access messages and a second access period when both the first and second groups can send access messages." Dupont, col. 3, lines 3-6.

However, Dupont does not disclose or suggest "at least one node [that] is configured to broadcast one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event" that broadcasts these inhibit messages "in response to receipt of the high priority message code." At best and quoted above, Dupont discloses sending an inhibit message. However, Dupont does not indicate that the inhibit message is sent "in response to receipt of the high priority message code" as recited in claim 92.

Also, Dupont does not disclose or suggest "inhibit[ing] messaging from nodes not engaged in conveying the high priority event" as recited in claim 92. Dupont discloses inhibiting a "second group" that is "inhibited from sending messages" at least during "a first access period." Dupont, col. 3, lines 3-6. However, Dupont discloses inhibits communication during a "first access period" of time. In contrast, claim 92 inhibits communication from "nodes not engaged in conveying the high priority event."

Thus, Dupont does not cure the acknowledged deficiencies in Clare and Wichter.

Applicant submits that the remaining cited art – Larsen, Myer, Kraus, Davis, Makansi, Humpleman, and Minoz – does not cure the above-mentioned deficiencies in Clare, Wichter, and Dupont. Thus, as the cited art does not disclose or suggest all of the recited functionality of claim 92, the cited art does not support a rejection of claim 92 under 35 U.S.C. § 103. Further, the

Examiner has failed to make a *prima facie* case of obviousness for claim 92 as required by M.P.E.P. § 2142.

For at least these reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of claim 92 under 35 U.S.C. § 103.

e. Response to Rejection of Claim 101

As mentioned above, the Examiner rejected claim 101 under 35 U.S.C. § 103 as allegedly being unpatentable over Clare in view of Wichter and Larsen. Applicant submits that the cited art does not support a rejection of claim 101 under 35 U.S.C. § 103.

As amended, claim 101 recites, in part, "at least one node is further configured to determine a message priority and an energy cost for communication and to distribute data and executable code through the network using messages of predetermined priority, wherein the energy cost is determined based on a plurality of attenuation values, wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication"

For at least the reasons presented above for claim 1, the cited art does not disclose or suggest at least the above-quoted functionality of claim 101 related to "the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication." Thus, the cited art does not support a rejection of claim 101 under 35 U.S.C. § 103. Further, the Examiner has failed to make a *prima facie* case of obviousness for claim 101 as required by M.P.E.P. § 2142.

Thus, for at least these reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of claim 101 under 35 U.S.C. § 103.

f. Response to Rejection of Claim 103

As mentioned above, the Examiner rejected claim 103 under 35 U.S.C. § 103 as allegedly being unpatentable over Clare in view of Wichter and Larsen. Applicant submits that the cited art does not support a rejection of claim 103 under 35 U.S.C. § 103.

As amended, claim 103 recites, in part, a "plurality of network elements is configured to distribute data processing through the sensor network in response to the energy cost for communication, wherein the energy cost is determined based on a plurality of attenuation values,

wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication."

For at least the reasons presented above for claim 1, the cited art does not disclose or suggest at least the above-quoted functionality of claim 103 related to "energy cost [that] is determined based on a plurality of attenuation values, wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication." Thus, the cited art does not support a rejection of claim 103 under 35 U.S.C. § 103. Further, the Examiner has failed to make a *prima facie* case of obviousness for claim 103 as required by M.P.E.P. § 2142.

Thus, for at least these reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of claim 103 under 35 U.S.C. § 103.

g. Response to Rejection of Claim 112

As mentioned above, the Examiner rejected claim 112 under 35 U.S.C. § 103 as allegedly being unpatentable over Clare in view of Wichter and Larsen. Applicant submits that the cited art does not support a rejection of claim 112 under 35 U.S.C. § 103.

As amended, claim 112 recites, in part, a "the plurality of network elements is configured to distribute, after the at least one local node has become a member of the sensor network, data processing on the collected data to one or more of the plurality of network elements, wherein the distribution of the data processing varies based on the message priority and an energy cost for communication, wherein the energy cost is determined based on a plurality of attenuation values, and wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication."

For at least the reasons presented above for claim 1, the cited art does not disclose or suggest at least the above-quoted functionality of claim 112 related to an "energy cost [that] is determined based on one or more attenuation values, and wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication." Thus, the cited art does not support a rejection of claim 112 under 35 U.S.C. § 103. Further, the Examiner has failed to make a *prima facie* case of obviousness for claim 112 as required by M.P.E.P. § 2142.

Thus, for at least these reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of claim 112 under 35 U.S.C. § 103.

h. Response to the Rejections of the Dependent Claims

Applicant submits that the remarks made above for independent claims 1, 62, 83, 92, 101, 103 and 112 apply equally to dependent claims 2-32, 34-62, 65-79, 94, and 113-119, as each respective dependent claim ultimately depends from independent claim 1, 62, 83, 92, 101, 103 or 112. Thus, the cited art does not support rejection of claims 2-32, 34-62, 65-79, 94, and 113-119 under 35 U.S.C. § 103. Further, the Examiner has failed to make a *prima facie* case of obviousness for claims 2-32, 34-62, 65-79, 94, and 113-119 as required by M.P.E.P. § 2142. Thus, for at least these reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of claims 2-32, 34-62, 65-79, 94, and 113-119 under 35 U.S.C. § 103.

5. Conclusion

There may be other reasons for patentability for the claims of this application, and Applicant does not waive the right to present those arguments at a later time. Applicant submits that all rejections have been addressed herein and respectfully requests the Examiner reconsider and withdraw all rejections for at least these reasons. If, in the opinion of the Examiner, a telephone conference would speed prosecution of this application, the Examiner is invited to call the undersigned at 312-913-3338.

Respectfully submitted,

McDONNELL BOEHNEN HULBERT & BERGHOFF LLP

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By: /Thomas J. Loos/
Thomas J. Loos
Registration No. 60,161